

## ***Environmental Studies 110*** ***Disease and the Environment***

Winter 2004, TR, 11-12:15, Girvetz 1116

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office Girvetz 2312, office hours Tuesdays 1-3 or by appointment

course website: [http://www.es.ucsb.edu/content/curriculum\\_info/es110/](http://www.es.ucsb.edu/content/curriculum_info/es110/)

ES 110 explores the interrelationship between human diseases and the environment. This exploration will include historical case studies as well as contemporary sources including film, fiction, political/social analysis and the news media. Students should gain from this course a better understanding of the multiple interactions among humans, the environment, microorganisms, and other causes of disease, as well as skills in the critical analysis of data from a variety of sources.

### **Texts**

Laurie Garrett, *The Coming Plague*

Robert Desowitz, *New Guinea Tapeworms and Jewish Grandmothers*

Sandra Steingraber, *Living Downstream*

Mark Plotkin, *Medicine Quest*

*Reader for ES 110*, available at Grafikart on Pardall Road in Isla Vista in week 2

### **Films** (on reserve at Kerr Hall)

*Outbreak* (Wolfgang Petersen, 1995) (watch before February 19)

*Ebola: The Plague Fighters* (Nova, 1996) (shown in class, February 19)

*The Brain Eater* (Nova, 2000) (watch before February 26)

*Can buildings make you sick?* (Nova, 1992) (watch before February 5)

### **Grading** (all components must be completed in order to pass)

Class attendance and participation: 15%

News item of the week: 10%

Midterm (multiple choice, January 29): 15%

Final (short answer, March 18, noon-3): 25%

Class project (due February 26 and March 11) : 35%

### **Course components**

1. Class attendance and participation. This is an interactive class, and attendance is important. I will take attendance. You are allowed three unexcused absences; more than that will detract from your grade. Attendance means being in class on time, with the assignment for that day completed.

2. News item of the week. Each Thursday (except January 29), four to six members of class will bring a relevant news item from the daily or weekly press to class to form the basis for that day's discussion. Your news item should include a one-page summary/analysis. The course website will include links to many newspapers. One goal of the class is to encourage

critical analysis of news media accounts, so write your own summary/analysis with this goal in mind. The website also includes a link to the Centers for Disease Control, which you should check regularly, particularly its bulletin on emerging infections.

3. Midterm, final. These will test your knowledge of key concepts, ideas, and people. On the final you will have the opportunity to use material from your course project.

4. Course project. This project has several components. Each student will choose a disease, problem, or concept to explore. Suggested topics and guidelines are on a separate sheet and on the website. You may also choose another topic not on the list. You must tell me your topic IN WRITING (e-mail is fine) by January 29. The end result will include:

- an annotated bibliography of the topic, consisting of no more than twenty sources, DUE FEBRUARY 26
- a four-part report, to discuss scientific, social/cultural, political, and past and future aspects of the topic. Each student should expect to write 8-9 typed, double-spaced pages, not including the bibliography.

The final reports are due on the last day of class, March 11. This is a detailed project and you will need to get started well in advance of the due date. I will have the reports graded in time for the final. I will read drafts if I receive them by February 26. This course fulfills the writing requirement.

### **Assignments and course schedule**

(readings should be completed by the end of the week for which they are assigned; so week 1's readings should be done by January 8)

#### **Part 1:**

##### **Week 1**

January 6      Course introduction  
 January 8      Defining "disease" and "environment"; evolution and disease  
 Assignment: Desowitz, ch. 1 and 2; Plotkin, ch. 2

##### **Week 2**

January 13      The Little Ice Age: Disease and Climate change  
 January 16      The Columbian Exchange  
 Assignment: Reader: Crosby, Diamond, Fagan, Ewald

##### **Week 3**

January 20      Environmental Change and Disease in North America, I (Lyme disease and Babesiosis)  
 January 22      Environmental Change and Disease in North America, II (Hanta virus)  
 Assignment: Desowitz, ch.11; Garrett, ch. 15; Reader: Cronon

##### **Week 4**

January 27      Global warming and disease  
 January 29      MIDTERM EXAM

Assignment: Garrett, ch. 16; Reader: Epstein; review for midterm

Week 5

February 3 Urban change and disease: tuberculosis

February 5 Urban change and disease: asthma, occupational diseases  
Assignment: Garrett, ch. 6, 9 and pp. 512-527; Desowitz, ch. 10; video: *Can buildings make you sick?*

Week 6

February 10 Malaria

February 12 AIDS  
Assignment: Garrett, ch. 2 and 11; Desowitz, ch. 4 and 5; Reader: Curtis

Week 7

February 17 Rain forest fevers, I

February 19 Rain forest fevers, II; video, *Ebola: The Plague Fighters*  
Assignment: Garrett, ch. 1, 3-5; Desowitz, ch. 6; Plotkin, ch. 1. Watch *Outbreak* if you have not already.

Week 8

February 24 Food-borne diseases, I

February 26 Food-borne diseases, II BIBLIOGRAPHIES DUE  
Assignment: Steingraber, ch. 7; Desowitz, ch. 3 and 12; Reader: Fox, video: *The Brain Eater*

Week 9

March 2 Cancer, I

March 4 Cancer, II  
Assignment: Garrett, chapter 8; Steingraber, complete

Week 10

March 9 The Search for Solutions

March 11 Review ESSAYS DUE  
Assignment: Garrett, ch. 17; Plotkin, complete

FINAL EXAM THURSDAY, MARCH 18, NOON-3